In the Claims

Applicant has submitted a new complete claim set showing marked up claims with insertions indicated by underlining and deletions indicated by strikeouts and/or double bracketing.

Please cancel claims 1-30 and 45-73 without prejudice or disclaimer.

1 – 30 (Cancelled)

31. (Original) A method for forming a gradient index plastic optical article comprising:

(a) forming a tube of polymeric sheathing material that is at least partially transparent to light at least one wavelength from at least one polymerizable sheathing monomer including a sheathing dopant; and

(b) forming a polymeric core that is at least partially transparent to light at at least one wavelength within the tube formed in step (a), with said core having a gradient in refractive index in a specific direction by:

(i) filling said tube with a composition including at least one polymerizable core monomer; and

(ii) polymerizing said core monomer.

32. (Original) The method of claim 31, wherein said tube of sheathing material is formed by:

(a) supplying a cylindrical polymerization container;

(b) placing a quantity of a composition including said at least one polymerizable sheathing monomer and said sheathing dopant into said container; and

(c) polymerizing said sheathing monomer to form a hollow polymeric tube.

33. (Original) The method of claim 31, wherein said sheathing dopant has a refractive index less than said polymerizable sheathing monomer when polymerized without the sheathing dopant.

34. (Original) The method of claim 31, wherein the composition in step (b)(i) further includes a core dopant.

35. (Original) The method of claim 34, wherein the core dopant has a refractive index greater than that of the polymerizable core monomer when polymerized without the core dopant.

36. (Original) The method of claim 31, wherein energy is supplied during step (b)(ii).

37. (Original) The method of claim 32, wherein energy is supplied during step (c).

38. (Original) The method of claim 36, wherein said energy is in the form of heat.

39. (Original) The method of claim 37, wherein said energy is in the form of heat.

40. (Original) The method of claim 32, wherein said polymerization container is rotated during step (c).

41. (Original) The method of claim 31, wherein said polymerizable sheathing monomer and said polymerizable core monomer are different.

42. (Original) The method of claim 31, wherein said polymerizable sheathing monomer and said polymerizable core monomer are the same.

43. (Original) The method of claim 42, wherein the polymerizable monomer is methyl methacrylate.

44. (Original) The method of claim 31 further comprising the step of hot-drawing the article formed after the completion of step (b) at a predetermined temperature and speed to form a gradient index optical fiber.

45 – 73 (Cancelled)